

**METHOD AND SYSTEM FOR REDUCING WIRELESS MULTI-CELL
INTERFERENCES THROUGH SEGREGATED CHANNEL ASSIGNMENTS
AND SEGREGATED ANTENNA BEAMS**

ABSTRACT

[0052] A method and system is disclosed for reducing multi-frequency signal interference in a wireless communication network. An available frequency spectrum is divided into a plurality of channels, a first wireless communication coverage unit is then segregated into a first number of geographical segments. After the segregated channels are grouped into a second number of channel blocks, each channel block is assigned to at least one of the segregated geographical segments with predetermined priorities. All the above steps are repeated for each neighboring wireless communication coverage unit of the first wireless communication coverage unit, wherein the channels in different channel blocks exhibit no higher mutual interference than the channels in the same channel block, and wherein the channel block assigned for each segregated segment of the first wireless communication coverage unit is different from the channel block assigned for the segregated segment of a second wireless communication coverage unit that immediately borders with the segregated segment of the first wireless coverage unit even if the first and second wireless communication coverage units share the same frequency spectrum.